

REMARKS/ARGUMENTS

This amendment is responsive to the Office Action dated March 11, 2005. The outstanding rejections are respectfully traversed as applied to the currently pending claims.

The current status of the claims is as follows. Claims 1, 3, 8, 9, 11, 13-15, 31-33, & 38-41 are amended herein. Claims 2, 4, 7, 10, 17, 23-31, & 34 are canceled. New Claim 42 is added. Therefore, Claims 1, 3, 5, 6, 8, 9, 11-16, 18-23, 32-33, & 35-42 are pending. Entry of the above amendments and reconsideration of the claims in light of the comments herein is requested.

Objection to Claim 14

Claim 14 has been amended substantially obviating the need for the pending objection. Applicants request that the objection be withdrawn.

Rejections under 35 U.S.C. § 112

Claims 1 and 13 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Amendments to these claims have been made. These amendments affect the grounds of rejection and are discussed in the following paragraphs.

- 1) Claim 1 is rejected under § 112 as reciting an unclear limitation of “a plurality of electrical contacts arranged so that at least some of the contacts extend through the substrate having an exposed bottom surface on the bottom surface of the substrate”. This language is no longer in the claim. Accordingly, the applicants respectfully request that this ground of rejection be withdrawn.

- 2) Additionally, another § 112 rejection is applied to Claim 13. The possibly confusing language “each comprised of at least one of the contacts and rows” has been deleted. Accordingly, it is now believed that the claim is now clearer. Therefore, the applicants respectfully request that this rejection be withdrawn.

Rejections under 35 USC 103:

All of the remaining claims have been rejected as being unpatentable under 35 U.S.C. § 103. Particularly, the claims are held unpatentably obvious over the U.S. Patent to *Huang* (USPN 6,384,472) in view of a variety of different references. The nature of these rejections and the effect of the amendments on them are discussed as follows.

Claims 4, 7, 10, and 31 are cancelled making moot the rejection of these claims. Applicants request that this ground of rejection be withdrawn as to those claims.

Rejections Under *Huang* and *Lee***Base Claim 1 (and the claims depending therefrom)**

Claim 1 stands rejected as obvious over *Huang* and *Lee* (USPN 6,713,322). In particular, *Huang* has been characterized as having contacts, wire bonding landings, lead segments and so on. The applicants must respectfully disagree. In actuality, the Office Action is very unclear in its identification of these elements in *Huang*. The Action has not specifically identified which element corresponds to each of the claim elements as required by the MPEP. For example, the portions of *Huang* that identify a contact, a wire bonding landing, a lead segment have not been provided or otherwise clearly pointed out. For example, the Action (at page 3) claims that *Huang* teaches “a lead-frame panel [602 in Fig. 10], including an array of devices, each device area having a plurality of contacts exposed on a bottom surface of the substrate panel”. Unfortunately, all Fig. 10 teaches is a lead frame panel 602. That is all. It does not teach “each device area having a plurality of contacts” (no identifying numbers provided) nor “exposed on a bottom surface” (no identifying numbers provided). The main reason for this is because no such distinction or teaching is present in *Huang*. *Huang* at very most teaches a wire bond pad 104. This particularly problematic because the Action alternatively uses this single bond pad 104 to represent each of the claimed separate elements of the claims. It is respectfully submitted that the Action is required to specifically set forth and identify each element in the cited art that corresponds to the claimed invention. This request is significant because the orientation and arrangement of these elements define certain aspects of the invention. This will be discussed in detail in the following paragraphs.

The structural distinctions between the cited art and the claimed invention are significant and it is hoped that the amendments to **Claim 1** and the following discussion will illustrate well this

distinction. First, Claim 1 recites “plurality of conductive features”. Each conductive feature includes a contact portion (the electrical contact of the previous claims) and a landing portion (the wire bonding landings of the prior claims). These two portions are connected by lead segments. The single wire bonding structure 104 of *Huang* is not the same thing. This point will be clarified in more detail in the following discussion.

Claim 1 describes a particularized arrangement between the various portions of the “conductive features”. This arrangement characterizes one of the distinctive aspects of the claimed invention. First, an “outermost landing portion” (See, e.g., 132 in Fig. 3C of the present specification) is arranged outward from a “contact portion” (See, e.g., 130 in Fig. 3C of the present specification). The applicants point out that Claim 1 recites “an outermost landing portion having a wirebonding surface located further away from the die attach pad than the contact portion near an edge of the device”. *Huang* does not teach or suggest a landing portion arranged outward from the associated contact portion (i.e., the landing portion being arranged further away from the center of the device area than the inside contacts). Nor does *Huang* teach an electrical connection between these two portions. The most that can be said of *Huang* is that a wire bonding surface 106 is formed on the inward side of the contact 104 with no connector. So, at best, the configuration is backwards from the claimed invention. This alone is a patentable distinction. However, this is further significant because Claim 1 recites a “contact portion” that “extends through the substrate to expose a bottom surface on the bottom of the substrate”. In *Huang*, it is the outer portion of 104 that is exposed on the bottom rather than the inner contacts of the claimed invention. Thus, *Huang* is constructed the opposite of the claimed invention. Moreover, this is made clear by pointing out that the prior art is a standard lead frame configuration with edge connectors 104. This is the opposite of the recited configuration which enables an array type configuration (for example, a BGA type configuration). Indeed, *Huang* and its structure miss the entire point of the claimed invention.

Quite simply, *Huang* does not teach or suggest an outer set of wire bond pads arranged further from the center than an associated set of inner contacts. Nor does it teach the connection of the wire bonding surfaces with the contacts using lead segments. Also, it does not teach that the inwardly positioned contacts are exposed bottom contacts. Rather, at most the prior art configuration is exactly the opposite (i.e., a standard lead frame package).

So, *Huang* does not teach all of the features of the invention.

Lee is offered for the proposition that the *Lee* teaches a contact portion that “extends through the substrate to expose a bottom surface on the bottom of the substrate”. This teaching omits and does not discuss the critical factor of the “connecting lead segment that extends between the contact portion and the landing portion” recited in Claim 1. This significant limitation is also missing from the *Huang* reference. Thus, since nothing in *Lee* materially affects the underlying insufficiency of the *Huang* reference, it cannot be said that the cited combination of references teach all of the claimed limitations in Claim 1. In particular, the cited combination does not teach or suggest a “plurality of conductive features” that each conductive feature includes a “contact portion”, a “landing portion” (for wire bonding) or that these two portions are connected by lead segments. Additionally, it does not teach or suggest that the landing portion is arranged outward from the associated contact portion closer to an outer edge of the device area than the associated contact portion. Also, the cited combination does not teach contacts that “extends through the substrate to expose a bottom surface on the bottom of the substrate”. Thus, the cited art fails to teach a multitude of claimed limitations. Absent this teaching the cited art fails to establish a *prima facie* case of obviousness as to the rejected Claim 1. Accordingly, the applicants respectfully request that this ground of rejection be withdrawn as to Claim 1.

It is sincerely hoped that this re-articulation of the substantial differences between the claimed invention and the cited art has clarified the patentable subject matter claimed herein.

The applicants further submit that dependent Claims 3, 5, 6, 8, 9, 31, 32, and 36 are patentable for numerous additional reasons. However, due to the underlying allowability of base Claim 1 the applicants believe that no further discussion of these dependent claims is necessary at this time. Therefore, for at least the reasons set forth above with respect to Claim 1, the applicants respectfully submit that the cited reference are insufficient to establish that the claimed invention is obvious as to the claims depending from Claim 1. Accordingly, applicants respectfully request that the pending ground of rejection for Claims 3, 5, 6, 8, 9, 31, 32, and 36 be withdrawn.

Base Claim 11 (and the claims depending therefrom)

Claim 11 stands rejected as obvious over *Huang* and *Lee*. As above, *Huang* has been mischaracterized as having contacts, wire bonding landings, lead segments and so on. As explained above, the Office Action was unclear in its identification of these elements in *Huang*. As above, the Action failed to specifically identify which element corresponds to a contact, a wire bonding landing, a lead segment.

The details of the amendments to Claim 11 will be discussed in detail in the following paragraphs.

The structural distinctions between the cited art and the claimed invention are significant and it is hoped that the amendments to **Claim 11** and the following discussion will illustrate well this distinction. First, Claim 11 recites “plurality of conductive features”. Each conductive feature includes a contact portion (the electrical contact of the previous claims) and a landing portion (the wire bonding landings of the prior claims). These two portions are connected by lead segments. The single wire bonding structure 104 of *Huang* is not the same thing. This point will be clarified in more detail in the following discussion.

Claim 11 describes a particularized arrangement between the various portions of the “conductive features”. This arrangement characterizes one of the distinctive aspects of the claimed invention. First, a “contact portion” (See, e.g., 130 in Fig. 3C of the present specification) is arranged inwardly from a “landing portion having a wire bonding surface” (See, e.g., 132 in Fig. 3C of the present specification). The applicants point out that Claim 11 recites “the landing portion is arranged outward from the associated contact portion and thereby closer to an outer edge of the device area than the associated contact portion”. *Huang* does not teach or suggest a contact inward from a landing portion, such landing portion being arranged further away from the center of the device area. Nor does *Huang* teach an electrical connection between these two portions. The most that can be said of *Huang* is that a wire bonding surface 106 is formed on the inward side of the contact 104 with no connector. So, at best, the configuration is backwards from the claimed invention. This alone is a patentable distinction. However, this is further significant because Claim 11 recites a “contact portion” having an “exposed bottom surface at the bottom ... wherein the contacts are arranged in a microarray configuration”. In *Huang*, it is the outer portion of 104 that is exposed on the bottom rather than the inner contacts of the claimed invention. Thus, *Huang* is

constructed the opposite of the claimed invention. Moreover, this is made clear by pointing out that the prior art is a standard lead frame configuration with edge connectors 104. This is the opposite of the recited array configuration ("microarray") claimed in claim 11. Indeed, *Huang* and its structure miss the entire point of the claimed invention.

Quite simply, *Huang* does not teach or suggest an outer set of wire bond pads arranged further from the center than an associated set of inner contacts. Nor does it teach the connection of the wire bonding surfaces with the contacts using lead segments. Also, it does not teach that the inwardly positioned contacts are exposed bottom contacts. Rather at most the configuration is exactly the opposite (i.e., a standard lead frame package).

So, *Huang* does not teach all of the features of the invention.

Lee is offered for the proposition that the *Lee* teaches "a contact portion having an exposed bottom surface at the bottom". This teaching omits and does not discuss the critical factor of "a connecting lead segment ... to electrically couple each contact portion with its associated landing portion" recited in Claim 11. This significant limitation is also missing from the *Huang* reference. Thus, since nothing in *Lee* materially affects the underlying insufficiency of the *Huang* reference, it cannot be said that the cited combination of references teaches all of the claimed limitations in Claim 11. In particular, the cited combination does not teach or suggest a "plurality of conductive features" that each conductive feature includes a "contact portion", a "landing portion" (for wire bonding) or that these two portions are connected by lead segments. Additionally, it does not teach or suggest that "the landing portion is arranged outward from the associated contact portion ... closer to an outer edge of the device area than the associated contact portion". Also, the cited combination does not teach contacts having an "exposed bottom surface ... arranged in a microarray configuration". Thus, the cited art fails to teach a multitude of claimed limitations. Absent this teaching the cited art fails to establish a *prima facie* case of obviousness as to the rejected Claim 11. Accordingly, the applicants respectfully request that this ground of rejection be withdrawn as to Claim 11.

It is sincerely hoped that this re-articulation of the substantial differences between the claimed invention and the cited art has clarified the patentable subject matter claimed herein.

The applicants further submit that dependent Claims 12, 14, 33, and 40 are patentable for numerous additional reasons. However, due to the underlying allowability of base Claim 11 the applicants believe that no further discussion of these dependent claims is necessary at this time.

Therefore, for at least the reasons set forth above with respect to Claim 11, the applicants respectfully submit that the cited reference are insufficient to establish that the claimed invention is obvious as to the claims depending from Claim 11. Accordingly, applicants respectfully request that the pending ground of rejection for Claims 12, 14, 33, and 40 be withdrawn.

Base Claim 15 (and the claims depending therefrom)

Claim 15 stands rejected as obvious over *Huang* and *Lee*. As above, *Huang* has been mischaracterized as having contacts, wire bonding landings, lead segments and so on. As explained above, the Office Action was unclear in its identification of these elements in *Huang*. As above, the Action failed to specifically identify which element corresponds to a contact, a wire bonding landing, and a lead segment.

The details of the amendments to Claim 15 will be discussed in detail in the following paragraphs.

The structural distinctions between the cited art and the claimed invention are significant and it is hoped that the amendments to Claim 15 and the following discussion will illustrate well this distinction. First, Claim 15 recites:

"a plurality of wire bonding landings being located outward from the contacts and more closely to the edge of the substrate and at a top surface of the substrate, lead segments that extend between the contacts and their associated wire bonding landings".

Each landing is located outwardly from its associated contact and connected by lead segments. The single wire bonding structure 104 of *Huang* is not the same thing. This point will be clarified in more detail in the following discussion.

Claim 15 describes a particularized arrangement between the various portions of the electrical contacts, wire bonding surfaces, and conductive traces. Their arrangement characterizes one of the distinctive aspects of the claimed invention. First, a "contact" (See, e.g., 130 in Fig. 3C of the present specification) is arranged inwardly from a "landing" (See, e.g., 132 in Fig. 3C of the present specification). The applicants point out that Claim 15 recites "landings being located outward from the contacts and more closely to the edge of the substrate". *Huang* does not teach or suggest a contact inward from a landing. In the claimed invention the landing is arranged further away from the center of the device area. Nor does *Huang* teach an electrical connection between these two portions. The most that can be said of *Huang* is that a wire bonding surface 106 is formed

on the inward side of the contact 104 with no connector. So, at best, the configuration is backwards from the claimed invention. This alone is a patentable distinction. However, this is further significant because Claim 15 recites a substrate "with the contacts having exposed contact surfaces on a bottom surface of the substrate". In *Huang*, it is the outer portion of 104 that is exposed on the bottom rather than the inner contacts of the claimed invention. Thus, *Huang* is constructed the opposite of the claimed invention. Moreover, this is made clear by pointing out that the prior art is a standard lead frame configuration with edge connectors 104 having no applicability to an array type configuration. As such, *Huang* and its structure miss the entire point of the claimed invention.

Quite simply, *Huang* does not teach or suggest an outer set of wire bond landings arranged near the edges of the device area and, in particular, further from the center of the device area than the associated inner contacts. Nor does it teach the connection of the wire bonding landings with the contacts using lead segments. Also, it does not teach that the inwardly positioned contacts are exposed bottom contacts. Rather, at most the prior art configuration is exactly the opposite (i.e., a standard lead frame package).

So, *Huang* does not teach all of the features of the invention.

Lee is offered for the proposition that the *Lee* teaches a substrate "with the contacts having exposed contact surfaces on a bottom surface of the substrate". This teaching omits and does not discuss the critical factor of the connecting lead segment that electrically couples each contact with its associated landing as recited in Claim 15. This significant limitation is also missing from the *Huang* reference. Thus, since nothing in *Lee* materially affects the underlying insufficiency of the *Huang* reference, it cannot be said that the cited combination of references teach all of the claimed limitations in Claim 15. In particular, the cited combination does not teach or suggest the recited arrangement, orientation, and connectivity between the recited "contacts" and "landings" or that these two portions are connected by lead segments. Additionally, it does not teach or suggest that "landings being located outward from the contacts and more closely to the edge of the substrate". Also, the cited combination does not teach interconnected (with the landings) contacts having "exposed contact surfaces on a bottom surface of the substrate". Thus, the cited art fails to teach many of the claim limitations. Absent this teaching the cited art fails to establish a *prima facie* case of obviousness as to the rejected Claim 15. Accordingly, the applicants respectfully request that this ground of rejection be withdrawn as to Claim 15.

It is sincerely hoped that this re-articulation of the substantial differences between the claimed invention and the cited art has clarified the patentable subject matter claimed herein.

The applicants further submit that dependent Claims 16, 18-20, 22, 23, 35, and 41 are patentable for numerous additional reasons. However, due to the underlying allowability of base Claim 15 the applicants believe that no further discussion of these dependent claims is necessary at this time. Therefore, for at least the reasons set forth above with respect to Claim 15, the applicants respectfully submit that the cited reference are insufficient to establish that the claimed invention is obvious as to the claims depending from Claim 15. Accordingly, applicants respectfully request that the pending ground of rejection for Claims 16, 18-20, 22, 23, 35, and 41 be withdrawn.

Rejections Under Huang and Chein-Hung

Claims 8 and 38 are all rejected under § 103 as being patentable over *Huang* in view of *Chien-Hung et al.* (U.S. Pat. Appl. No. 2003/0006055 hereinafter "*Chein-Hung*"). These claims are all believed to be allowable for at least the reasons advanced in support of the base Claim 1. In other words, *Huang* fails to teach or suggest a "plurality of conductive features" having a "contact portion" and a "landing portion" connected by lead segments. Additionally, it does not teach or suggest that the landing portion is arranged outward from the associated contact portion closer to an outer edge of the device area than the associated contact portion. Also, the cited combination does not teach contacts that "extends through the substrate to expose a bottom surface on the bottom of the substrate". The same limitations are found in *Chien-Hung*. For example, referring to Figs 1, 2, and 4 of *Chien-Hung*, it is clear that the cited art does not teach contacts and landings interconnected by connector segments nor does it teach that the "landing portion is arranged outward from the associated contact portion" and the landing portion is "closer to an outer edge of the device area than the associated contact portion". In fact *Chien-Hung* teaches quite the opposite, with landings on the outer edge and no connector segments at all. Accordingly, these significant limitations are also missing from the *Chien-Hung* reference. Thus, since nothing in *Chien-Hung* materially affects the underlying insufficiency of the *Huang* reference, it cannot be said that the cited combination of references teach all of the claimed limitations in Claim 1 or dependent Claims 8 and 38. Absent this teaching the cited combination of references fails to establish a *prima facie* case of obviousness as to the rejected Claims 8 & 38. Accordingly, since the cited combination of references fails to establish a *prima facie* case of obviousness as to these claims, the applicants respectfully request that this ground of rejection be withdrawn as to Claims 8 & 38.

Rejections Under *Huang, Lee, and Chien-Hung*

Claim 13

Claim 13 is rejected under § 103 as being patentable over *Huang*, in view of *Lee*, and further in view of *Chien-Hung*. These claims are all believed to be allowable for at least the reasons advanced in support of the base Claim 11. In other words, *Huang* fails to teach or suggest a “plurality of conductive features” arranged so that each conductive feature includes a “contact portion” and a “landing portion” connected by a lead segment. Additionally, none of the cited art teaches or suggests that “the landing portion is arranged outward from the associated contact portion ... closer to an outer edge of the device area than the associated contact portion”. All references cited teach exactly the opposite. Also, the cited combination does not teach contacts having an “exposed bottom surface ... arranged in a microarray configuration”. Thus, the cited art fails to teach a multitude of claimed limitations. Absent this teaching the cited art failed to establish a *prima facie* case of obviousness as to the base Claim 11.

The same limitations are found in *Chien-Hung*. For example, referring to Figs 1, 2, and 4 of *Chien-Hung*, it is clear that the cited art does not teach contacts and landings interconnected by connector segments nor does it teach that the “landing portion is arranged outward from the associated contact portion” and the landing portion is “closer to an outer edge of the device area than the associated contact portion”. In fact *Chien-Hung* teaches quite the opposite, with landings on the outer edge and no connector segments at all. Accordingly, *Chien-Hung* is just more of the same, i.e., the same limitations are also not taught or suggested in the *Chien-Hung* reference. Thus, since nothing in *Chien-Hung* materially affects the underlying insufficiency of the *Huang* and *Lee* references, it cannot be said that the cited combination of references teach all of the claimed limitations in Claim 11 or dependent Claim 13. Absent this teaching the cited combination of references fails to establish a *prima facie* case of obviousness as to the rejected Claim 13. Accordingly, since the cited combination of references fails to establish a *prima facie* case of obviousness as to these claims, the applicants respectfully request that this ground of rejection be withdrawn as to Claim 13.

Claim 21

Claim 21 is rejected under § 103 as being patentable over *Huang*, in view of *Lee*, and further in view of *Chien-Hung*. These claims are all believed to be allowable for at least the reasons advanced in support of the base Claim 15. In other words, *Huang* and *Lee* failed to teach or suggest the recited arrangement, orientation, and connectivity between the recited “contacts” and “landings” or that these two portions are connected by lead segments. Moreover, the cited combination failed to teach or suggest “landings being located outward from the contacts and more closely to the edge of the substrate”. Also, the cited combination does not teach the interconnected (with the landings) inwardly positioned contacts having “exposed contact surfaces on a bottom surface of the substrate”.

Thus, the cited combination fails to teach many of the claim limitations. Absent this teaching the cited art fails to establish a *prima facie* case of obviousness as to the rejected Claim 15.

The same lack of teaching is a problem in *Chien-Hung*. For example, referring to Figs 1, 2, and 4 of *Chien-Hung*, it is clear that the cited art does not teach contacts and landings interconnected by connector segments nor does it teach that the landing portion is arranged outward from the associated contact portion. In fact, as already explained, *Chien-Hung* teaches quite the opposite, with landings on the outer edge and no connector segments at all. Thus, since nothing in *Chien-Hung* materially affects the underlying insufficiency of the *Huang* and *Lee* references, it cannot be said that the cited combination of references teach all of the claimed limitations in Claim 15 or dependent Claim 21. Absent this teaching the cited combination of references fails to establish a *prima facie* case of obviousness as to the rejected Claim 21. Accordingly, since the cited combination of references fails to establish a *prima facie* case of obviousness as to these claims, the applicants respectfully request that this ground of rejection be withdrawn as to Claim 21.

Rejections Under *Huang, Lee, and Murtaza*

Claim 37

Claim 37 is rejected under § 103 as being patentable over *Huang*, in view of *Lee*, and further in view of *Murtaza et al.* (USPN 6, 849,944 hereinafter "*Murtaza*"). Claim 37 is believed to be allowable for at least the reasons advanced in support of the base Claim 1/36. In other words, *Huang* and *Lee* failed to teach or suggest the recited arrangement, orientation, and connectivity between the recited inner contacts and outer landings or that these two portions are connected by lead segments. Moreover, the cited combination fails to teach or suggest that the "innermost contact portion ... extends through the substrate to expose a bottom surface". Also, the cited combination does not teach the interconnected (with the landings) inwardly positioned contacts having "exposed contact surfaces on a bottom surface of the substrate". Thus, the cited combination fails to teach many of the claim limitations. Absent this teaching the cited art fails to establish a *prima facie* case of obviousness as to the rejected Claim 1.

Nothing in *Murtaza* corrects this deficiency. All *Murtaza* teaches is that ball grid array ("BGA") technologies are known. This is not relevant to the deficiencies of the cited art. Additionally, it is not the BGA that is inventive, it is the novel use of a lead frame package to construct a BGA-like packaging substrate that is novel. None of the cited art speaks to this issue either. Accordingly, there is not even a motivation to combine *Murtaza* with the other references. It is clear that the *Murtaza* (or the other combined references) do not teach contacts and landings interconnected by connector segments nor does it teach that the landing portion is arranged outward from the associated contact portion. In fact, as already explained the cited art teaches quite the opposite, with landings on the outer edge and no connector segments at all. Thus, since nothing in

Murtaza materially affects the underlying insufficiency of the *Huang* and *Lee* references, it cannot be said that the cited combination of references teach all of the claimed limitations in Claim 1 or dependent Claim 37. Absent this teaching the cited combination of references fails to establish a *prima facie* case of obviousness as to the rejected Claim 37. Accordingly, since the cited combination of references fails to establish a *prima facie* case of obviousness as to these claims, the applicants respectfully request that this ground of rejection be withdrawn as to Claim 37.

Rejections Under *Huang, Lee, Chien-Hung, and Murtaza*

Claim 39

Claim 39 is rejected under § 103 as being patentable over *Huang*, in view of *Lee*, in view of *Chien-Hung*, and further in view of *Murtaza*. Claim 39 is believed to be allowable for at least the reasons advanced in support of the base Claim 1/8. In other words, *Huang* and *Lee* and *Chien-Hung* failed to teach or suggest the recited arrangement, orientation, and connectivity between the recited inner contacts and outer landings or that these two portions are connected by lead segments. Moreover, the cited combination fails to teach or suggest that the "innermost contact portion ... extends through the substrate to expose a bottom surface". Also, the cited combination does not teach the interconnected (with the landings) inwardly positioned contacts having "exposed contact surfaces on a bottom surface of the substrate". Thus, the cited combination fails to teach many of the claim limitations. Absent this teaching the cited art fails to establish a *prima facie* case of obviousness as to the rejected Claim 1.

Nothing in *Murtaza* corrects this deficiency. All *Murtaza* teaches is that ball grid array ("BGA") technologies are known. This is not relevant to the deficiencies of the cited art. Additionally, it is not the BGA that is inventive, it is the novel use of a lead frame package to construct a BGA-like packaging substrate that is novel. None of the cited art speaks to this issue either. Accordingly, there is not even a motivation to combine *Murtaza* with the other references. It is clear that the *Murtaza* (or the other combined references) do not teach contacts and landings interconnected by connector segments nor does it teach that the landing portion is arranged outward from the associated contact portion. In fact, as already explained the cited art teaches quite the opposite, with landings on the outer edge and no connector segments at all. Thus, since nothing in *Murtaza* materially affects the underlying insufficiency of the *Huang* and *Lee* references, it cannot be said that the cited combination of references teach all of the claimed limitations in Claim 1 or dependent Claim 37. Absent this teaching the cited combination of references fails to establish a *prima facie* case of obviousness as to the rejected Claim 37. Accordingly, since the cited combination of references fails to establish a *prima facie* case of obviousness as to these claims, the applicants respectfully request that this ground of rejection be withdrawn as to Claim 37.

New Claims

New Claim 42 addresses a specific patentable feature of wire bonding landing thickness.

Conclusion:

In view of the foregoing amendments and remarks, it is respectfully submitted that the claimed invention as presently presented is patentable over the art of record and that this case is now in condition for allowance.

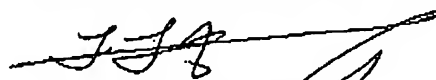
Accordingly, the applicants request withdrawal of all pending rejections and request reconsideration of the pending application and prompt passage to issuance. As an aside, the applicants clarify that any lack of response to any of the issues raised by the Examiner is not an admission by the applicant as to the accuracy of the Examiner's assertions with respect to such issues. Accordingly, applicant's specifically reserve the right to respond to such issues at a later time during the prosecution of the present application, should such a need arise.

As always, the Examiner is cordially invited to telephone the applicants representative to discuss any matters pertaining to this case. Should the Examiner wish to contact the undersigned for any reason, the telephone numbers set out below can be used.

Additionally, if any fees are due in connection with the filing of this Amendment, the Commissioner is authorized to deduct such fees from the undersigned's Deposit Account No. 50-0388 (Order No. NSC1 P274).

Respectfully submitted,

BEYER WEAVER & THOMAS, LLP



Francis T. Kalinski II
Registration No. 44,177

P.O. Box 70250
Oakland, CA 94612-0250
Telephone: (831) 642-9609
Alt. Tel.: (650) 961-8300